PATENT

CLAIM AMENDMENTS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A method comprising:

determining an input resolution of an image;

determining an output resolution of an image; and

providing a control word comprising a first variable indicating a number of input pixels in a scaling cycle, a second variable indicating a number of output pixels in a scaling cycle, and a third variable indicating a number of right shifts which, when applied to the second variable, indicates a number of phases used in the scaling cycle.

2. (Original) The method of claim 1, further comprising:

determining a greatest common denominator (GCD) for the input resolution and the output resolution; and

determining the first variable by dividing the input resolution by the GCD.

3. (Previously Presented) The method of claim 2, further comprising:

determining the second variable by dividing the output resolution by the GCD; and

determining a number of phases used in the scaling cycle by right shifting the second variable by the number of right shifts indicated by the third variable to obtain a value less than or equal to an available number of phases.

4. (Previously Presented) The method of claim 2, further comprising:

determining the second variable by dividing the output resolution by the GCD; and

determining the third variable to be a number of right shifts applied to the second variable to obtain a value less than or equal to an available number of phases.

5. (Original) The method of claim 1, wherein determining the input resolution includes determining the input resolution by reading a register value.

6. (Original) The method of claim 5, wherein determining the input resolution includes the register value representing a number of input pixels in a specific dimension.

7. (Canceled)

8. (Canceled)

9. (Canceled)

10. (Previously Presented) A method of scaling an image comprising:

incrementing a current phase location within a scaling cycle by a first variable to obtain a first adjusted value, the first variable indicative of a number of input pixels in the scaling cycle;

decrementing, in response to the first adjusted value being greater than a second variable, the first adjusted value by one or more times the second variable indicative of a number of output pixels in the scaling cycle to obtain a second adjusted value less than the second variable; and

determining an index value to access a coefficient set by right shifting the second adjusted value a predetermined amount.

11. (Original) The method of claim 10 further comprising:

accessing the coefficient set based on the index value; and

determining a scaled pixel value based upon the coefficient set.

12. (Previously Presented) The method of claim 10 further comprising:

when the index value is within a first range, accessing the coefficient set from a mirror location;

when the index value is within a second range, accessing the coefficient set from a direct location; and

determining a scaled pixel value based upon the coefficient set.

13. (Original) The method of claim 12 wherein determining the scaled pixel value further comprises reversing the coefficients when the coefficient set is accessed from a mirror location.

14. (Original) The method of claim 10 further comprising:

receiving the predetermined amount from a control word.

15. (Original) The method of claim 10 further comprising:

determining the predetermined amount from a control word

16. (Previously Presented) A video scaler comprising:

a means for incrementing a current phase location within a scaling cycle by a first variable to obtain a first adjusted value, the first variable indicative of a number of input pixels in the scaling cycle;

a means for decrementing, in response to the first adjusted value being greater than a second variable, the adjusted value by one or more times the second variable indicative of a number of output pixels in the scaling cycle to obtain a second adjusted value less than the second variable; and

a means for determining an index value to access a coefficient set by right shifting the second adjusted value a predetermined amount.

17. (Previously Presented) A system comprising:

an data processor for executing instructions; and

a memory for storing the instructions, the instructions to:

increment a current phase location within a scaling cycle by a first variable to obtain a first adjusted value, the first variable indicative of a number of input pixels in the scaling cycle;

decrement, in response to the first adjusted value being greater than a second variable, the adjusted value by one or more times the second variable indicative of a number of output pixels in the scaling cycle to obtain a second adjusted value less than the second variable; and

determine an index value to access a coefficient set by right shifting the second adjusted value a predetermined amount.

18. (Previously Presented) A computer readable media storing control information for implementing a plurality of operations, the operations to:

increment a current phase location within a scaling cycle by a first variable to obtain a first adjusted value, the first variable indicative of a number of input pixels in the scaling cycle;

decrement, in response to the first adjusted value being greater than a second variable, the adjusted value by one or more times the second variable indicative of a number of output pixels in the scaling cycle to obtain a second adjusted value less than the second variable; and

determine an index value to access a coefficient set by right shifting the second adjusted value a predetermined amount.